LABOR CABINET
Department of Workplace Standards
Division of Occupational Safety and Health Compliance
Division of Occupational Safety and Health Education and Training

803 KAR 2:500E
Maritime Employment

RELATES TO: KRS 338, 29 CFR 1915, 1917, 1918, 1919
STATUTORY AUTHORITY: KRS 338.051(3), KRS 338.061, 29 CFR 1915, 1917, 1918, 1919
NECESSITY, FUNCTION, AND CONFORMITY: KRS 338.051(3) authorizes the Kentucky Occupational Safety and Health Standards Board to promulgate occupational safety and health administrative regulations. KRS 338.061(2) authorizes the Board to incorporate by reference established federal standards and national consensus standards. This administrative regulation establishes standards to be enforced by the Division of Occupational Safety and Health Compliance in the maritime industry.

Section 1. Definitions for Section 2 of this administrative regulation:

(1) ***"Administration"*** means the Kentucky Occupational Safety and Health Program, Frankfort, Kentucky.

(2) ***"Area Director"*** means Director, Division of Occupational Safety and Health, Kentucky Labor Cabinet;

(3) ***"Assistant Secretary"*** means Secretary of Labor, Kentucky Labor Cabinet;

(4) ***"U.S. Department of Labor"*** means Kentucky Labor Cabinet, U.S. 127 South, Frankfort, KY 40601, or U.S. Department of Labor.

Section 2. Incorporation by Reference. (1) The following is incorporated by reference:

(a) The revisions to 29 CFR Part 1915.4 through 29 CFR Part 1915.1001, and Appendices, as published in the Federal Register, July 3, 2002, Volume 67, Number 128;

(b) 29 CFR Part 1917, revised as of July 1, 2002;

(c) 29 CFR Part 1918, revised as of July 1, 2002;

(d) 29 CFR Part 1919, revised as of July 1, 2002.

(2) This material may be inspected, copied, or obtained subject to applicable copyright law, at the Kentucky Labor Cabinet, Division of Education and Training, 1047 U.S. 127 South, Frankfort, Kentucky 40601, Monday through Friday, 8 a.m. - 4:30 p.m.

(3) This material may also be obtained from the Office of the Federal Register, National Archives and Records Services, General Services Administration.

PART 1919
GEAR CERTIFICATION

Subpart A
General Provisions

1919.1
Purpose and Scope

(a) The regulations in this Part implement 1915.115, 1917.50 and 1918.11 of this chapter. They provide procedures and standards governing accreditation of persons by the Occupational Safety and Health Administration, U.S. Department of Labor, for the purpose of certificating vessels' cargo gear and shore-based material handling devices, and the manner in which such certification shall be performed.

(b) Accreditation is not required, and the regulations of this part are not applicable, under the following circumstances:

(1) When cargo gear certification is performed for vessels inspected and certificated under the authority of the U.S. Coast Guard[1], or for foreign vessels certificated under the requirements of a foreign nation or by persons acceptable for certification purposes by a foreign nation.

(2) When cargo gear certification is performed for shore-based material handling devices under standards established and enforced by the States wherein the devices are located, or by political subdivisions delegated this responsibility by the States, provided such standards meet the requirements of 1917.50(b)(2) of this chapter.

(c) Persons not required to be accredited for gear certification purposes, as set forth in paragraph (b) of this section, may, nevertheless, apply for and receive accreditation by the Administration. The appropriate subparts of this part shall apply to persons accredited pursuant to this paragraph except insofar as exemptions may be granted.

[1]Jurisdiction of the U.S. Coast Guard extends to matters within the scope of title 52 of the Revised Statutes and Acts supplementary or amendatory thereto (46 U.S.C. 1-1388, passim); to matters within the regulatory authority of the U.S. Coast Guard under the provisions of the Espionage Act of June 15, 1917, as amended (40 Stat. 220; 50 U.S.C. 191 et seq.; 22 U.S.C. 401 et seq.) or to matters within the regulatory authority of the U.S. Coast Guard under section 4(e) of the Outer Continental Shelf Lands Act of Aug. 7, 1953 (67 Stat. 462; 43 U.S.C. 1333).

1919.2
Definition of Terms

(a) ***"Vessel"*** means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water, including special-purpose floating structures not primarily designed for or used as a means of transportation on water.

(b) Except as otherwise noted, ***"cargo gear***", as used in Subparts B through E of this part, includes that gear forming a part of a vessel's equipment which is used for the handling of cargo other than bulk liquids, but does not include gear which is used only for handling or holding hoses, handling ships' stores, or handling the gangway, or boom conveyor belt.

(c) With reference to equipment covered by this part-

(1) ***"Derrick***" means:

(i) When applied to vessels' cargo handling gear, a mechanical device for lifting, including a boom which is suspended at its head by a topping lift from a mast, king post, or similar structure, controlled in the horizontal plane by vangs, and used either singly or in pairs with married falls;

(ii) When applied to shore-based material handling devices, a mechanical device intended for lifting, with or without a boom supported at its head by a topping lift from a mast, fixed A frame, or similar structure. The mast or equivalent member may or may not be supported by guys or braces. The boom, where fitted, may or may not be controlled in the horizontal plane by guys (vangs). The term includes shear legs.

(2) ***"Crane"*** means a mechanical device, intended for lifting or lowering a load and moving it horizontally, in which the hoisting mechanism is an integral part of the machine. A crane may be a fixed or mobile machine.

(3) ***"Bulk cargo spout"*** means a spout which may or may not be telescopic and may or may not have removable sections, but is suspended over the vessel from some overhead structure by wire rope or other means. Such a spout is often used with a "thrower"or "trimming machine". A grain loading spout is an example of those covered by this definition.

(4) ***"Bulk cargo sucker"*** means a pneumatic conveyor which utilizes a spoutlike device, which may be adjustable vertically and/or laterally, and which is suspended over a vessel from some overhead structure by wire rope or other means. An example of an installation of this nature is the "grain sucker"used to discharge grain from barges.

(d) ***"Assistant Secretary***" means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or his authorized representative.

(e) ***"Administration"*** means the Occupational Safety and Health Administration, U.S. Department of Labor.

(f) ***"Person"*** includes any individual, partnership, corporation, agency, association, or organization.

(g) ***"Competent person"*** means:

(1) An individual qualified to perform gear certification functions with respect to vessels' cargo handling gear, as specifically set forth in 1919.37.

(2) An individual qualified under the provisions of Subparts F and G of this part to perform gear certification functions with respect to shore-based material handling devices.

(h) ***"Ton"*** means a ton of 2,240 pounds when applied to vessels' cargo handling gear, and a ton of 2,000 pounds when applied to shore-based material handling devices or to shore-type cranes permanently mounted aboard barges or other vessels employed in domestic trade and designed on the basis of the 2,000-pound ton. Capacity ratings may be stated in pounds.

(i) ***"Nondestructive examination"*** means examination of structure or parts by electronic, ultrasonic, or other nondestructive examination suitable for the purpose.

Subpart B
Procedure Governing Accreditation

1919.3
Application for Accreditation

(a) Application. Any person seeking accreditation shall file an original and duplicate copy of an application for accreditation with the Assistant Secretary of Labor for Occupational Safety and Health, United States Department of Labor, Washington, D.C. 20210, on a form provided by the Administration for this purpose. Each application shall be signed and certified by the applicant and, if the applicant is an agency or organization, by a responsible officer of such agency or organization.

(b) Contents of application. The application form shall include the following information:

(1) A statement detailing the applicable types of work performed by the applicant in the past, noting the amount and extent of such work performed within the previous three years, listing representative vessels involved, and including representative job orders, if available, or equivalent evidence;

(2) Descriptive details concerning any testing instruments and heat treatment furnaces which are to be used in conducting required tests or heat treatments. Test reports indicating that instruments meet the accuracy standards set forth in this part shall be included;

(3) A list setting forth the ports in which applicant currently conducts his business as well as those in which he proposes to conduct gear certification activities;

(4) A list of the applicant's responsible qualified personnel, both supervisory and managerial and including any surveyors, with resumes of their individual experience in the testing, examination, inspection and heat treatment of cargo gear. Such list shall include any branch office personnel or surveyors appointed to act in the applicant's behalf in any of the ports of the United States: Provided, however, That where the submission of individual resumes would be unduly burdensome because of the large number of persons engaged in the applicant's behalf, the applicant, after stating this fact, need only submit a list of its personnel together with a detailed statement of the qualifications upon which the appointment of surveyors is based;

(5) A detailed schedule of the fees proposed to be charged for the various gear certification services;

(6) Evidence of financial stability;

(7) Names of at least three business references who will furnish information regarding work performed by applicant;

(8) Any additional information the applicant deems to be pertinent.

1919.4
Action Upon Application

(a) Upon receipt of an application for accreditation, the Assistant Secretary shall approve or deny the application. The Assistant Secretary may conduct an investigation, which may include a hearing, prior to approving or denying an application. To the extent he deems appropriate, the Assistant Secretary may provide an opportunity to other interested persons to present data and views on the application prior to approval or denial.

(b) Any application which fails to present the information required by the prescribed form may be returned to the applicant with a notation of deficiencies and without prejudice to submission of a new or revised application.

(c) If the application is approved, notice of approval shall be mailed to the applicant. If the application is denied, notice of such denial shall be mailed to the applicant and such denial shall be without prejudice to any subsequent application except where such action is deemed to be in the public interest. In the event an application is denied with prejudice, the provisions of 1919.9 shall be applicable.

(d) A copy of the notice of accreditation shall be kept on file by applicant at the applicant's place of business.

1919.5
Duration and Renewal of Accreditation

The period of accreditation shall not exceed three years. Applications for renewal of accreditation shall be made on the same form as described in 1919.3. No accreditation shall expire until action on an application for renewal shall have been finally determined, provided that such application has been properly executed in accordance with 1919.3 and filed with and received by the Assistant Secretary not less than 15 nor more than 60 days prior to the expiration date. A final determination means either the approval or initial denial of the application for renewal. The procedure specified in 1919.4 shall be applicable to all applications for renewal.

1919.6
Criteria Governing Accreditation to Certificate Vessels' Cargo Gear

(a)(1) A person applying for accreditation to issue registers and pertinent certificates, to maintain registers and appropriate records, and to conduct initial, annual and quadrennial surveys shall not be accredited unless he is engaged in one or more of the following activities:

(i) Classification of vessels;

(ii) Certification of vessels' cargo gear;

(iii) Shipbuilding or ship repairing, or both insofar as related to work on vessels' cargo handling gear;

(iv) Unit and loose gear testing of vessels' cargo handling gear.

(2) Applicants for accreditation under paragraph (a)(1) of this section for operations in coastal or Great Lakes ports who come within paragraph (a)(1)(ii) or (iv) shall not be accredited unless they conduct at least 1,500 hours of cargo gear certification work per year.

(b) A person applying for accreditation to carry out tests of loose gear or wire rope, or both, or to carry out heat treatments, and to issue the related certificates, shall be engaged in one or both of the following activities:

(1) Testing of loose gear or wire rope, or both;

(2) Heat treatment of chains and loose cargo gear.

(c)(1) A person applying for accreditation shall be staffed by individuals technically qualified to conduct the inspections and examinations and to conduct or supervise tests and heat treatments prescribed in this part. Any representatives, agents or surveyors acting on behalf of a person applying for accreditation in ports in which such operations are conducted shall be similarly qualified.

(2) Accreditation to conduct such nondestructive examination as may be a part of any certification activity may be granted to applicants found competent and equipped to carry out this activity.

(d) Except as noted in 1919.1(c), and unless exemptions are granted under 1919.10(h), a person applying for accreditation as specified in paragraph (a) of this section shall be prepared to carry out all of the requirements of Subparts C, D, and E, of this part except that loose gear and wire rope tests and heat treatments may be carried out by the manufacturer of the gear concerned or by another person accredited specifically for this purpose.

(e) A person applying for accreditation shall have a satisfactory record of performance, and shall be in sound financial condition.

1919.7
Voluntary Amendment or Termination of Accreditation

The accreditation of any person may be voluntarily amended or terminated upon written request filed with the Assistant Secretary.

1919.8
Suspension or Revocation of Accreditation

The Assistant Secretary may suspend or revoke the accreditation of any person for cause. Except in cases of willfulness or cases in which the public interest requires otherwise, before any accreditation is suspended or revoked, facts or conduct which may warrant such action shall be called to the attention of the person involved in writing and that person shall be afforded an opportunity to achieve or demonstrate appropriate compliance.

1919.9
Reconsideration and Review

(a) Any person aggrieved by the action of the Assistant Secretary or his authorized representative in denying, granting, suspending or revoking an accreditation under this part may within 15 days after such action, (1) file a written request for reconsideration thereof by the Assistant Secretary or the authorized representative of the Assistant Secretary who made the decision in the first instance, or (2) file a written request for review of the decision by the Assistant Secretary or an authorized representative of the Assistant Secretary, who has taken no part in the action which is the subject for review.

(b) A request for reconsideration shall be granted where the applicant shows that there is additional evidence which may materially affect the decision and that there were reasonable grounds for failure to adduce such evidence in the original proceedings.

(c) Any person aggrieved by the action of the Assistant Secretary or authorized representative of the Assistant Secretary in denying a request for reconsideration may, within 15 days after the denial of such request, file with the Assistant Secretary or his authorized representative a written request for review.

(d) Any person aggrieved by the reconsidered determination of the Assistant Secretary or authorized representative of the Assistant Secretary, may within 15 days after such determination, file with the Assistant Secretary a written request for review.

(e) A request for review shall be granted where reasonable grounds for the review are set forth in the request.

(f) If a request for reconsideration or review is granted, all interested persons shall be afforded an opportunity to present their views.

(g) No cargo gear certification function shall be performed by any person seeking reconsideration or review under this section pending the final decision with respect to such reconsideration or review.

Subpart C
Duties of Persons Accredited to Certificate Vessels' Cargo Gear

1919.10
General Duties; Exemptions

(a) Except as noted in 1919.1 and in paragraph (h) of this section, the requirements set forth in Subparts D and E of this part shall be strictly adhered to in all testing, examinations, inspections, and heat treatments.

(b) Supervision of all testing, examinations, inspections, and heat treatments shall be carried out only by such persons as are listed in the application for accreditation, or subsequent supplements thereto, submitted pursuant to this part.

(c) The certificates issued by an accredited person shall be signed and all register entries made only by an authorized agent of such accredited person. No certification shall be issued until any deficiencies considered by the accredited person to constitute a currently unsatisfactory condition have been corrected. Replacement parts shall be of equal or better quality as original equipment and suitable for the purpose. In the event deficiencies remain uncorrected and no certification may therefore be issued, the accredited person shall inform the nearest District Office of the Administration of the circumstances.

(d) Dynamometers or other recording test equipment owned by an accredited person shall have been tested for accuracy within the six months next preceding application for accreditation or renewal of same. Such test shall be performed with calibrating equipment which has been checked in turn so that indications are traceable to the National Bureau of Standards. A copy of test reports shall accompany the application. Where test equipment is not the property of the accredited person, that person shall not issue any certificate based upon the use of such equipment unless its owner has made available a certificate of accuracy based on the requirements of this paragraph, obtained within 1 year prior to such use and stating the errors of the equipment. Reasonable standards of accuracy shall be met and proof loads adjusted as necessary.

(e) An accredited person shall, upon request, provide the nearest local office of the Administration with advance information as to scheduled testing or of such other functions as are performed and facilitate the Administration's observation of any such activities as it may desire to witness: Provided, however, That tests need not be delayed, except when specifically requested by the Administration under unusual circumstances.

(f) All cargo gear registers or certificates issued by an accredited person shall be made on forms prescribed or approved by the Administration.

(g) Unless otherwise instructed by the Assistant Secretary in specific instances, any person accredited under 1919.6(a) shall accept certificates, relating to loose gear or wire rope tests or to heat treatments which are issued by the manufacturer of the gear concerned, by another person accredited specifically by the Assistant Secretary for this purpose, or by any other person whose certificates are acceptable to the Administration. Such certificates shall either be attached as a part of the vessel's certification or shall be used as the basis for the issuance of the accredited person's own loose gear, wire rope, or heat treatment certificates. In the latter case, the original certificates shall be kept on file by the accredited person as part of the permanent record of the vessel concerned.

(h) In case of practical difficulties or unnecessary hardships, the Assistant Secretary in his discretion may grant exemptions from any provision of Subparts C, D, and E of this part.

1919.11
Recordkeeping and Related Procedures Concerning Records in Custody of Accredited Persons

(a) An accredited person shall maintain records of all work performed under Subparts D and E of this part.

(b) An accredited person shall maintain a continuous record of the status of the certification of each vessel issued a register by such person.

(c) The records required in paragraphs (a) and (b) of this section shall be available for examination by the Assistant Secretary.

(d) When annual or quadrennial tests, inspections, examinations, or heat treatments are performed by an accredited person, other than the person who originally issued the vessel's register, such accredited person shall furnish copies of any certificates issued and information as to register entries to the person originally issuing the register.

(e) An accredited person shall inform the nearest local office of the Administration whenever a vessel is initially certificated under these regulations and a register in the prescribed form has been issued.

(f) A copy of each certificate relating to unit tests or thorough examinations, except those issued by the manufacturer and those issued by accredited persons outside of the United States, shall be sent to the nearest local office of the Administration within 10 days after issuance. Such records shall form a part of the Administration's file on the accredited person.

(g) An accredited person shall promptly notify the nearest local office of the Administration with respect to any changes in technical personnel, in fee schedules in geographical areas in which operations are conducted, or other pertinent substantial changes in its organization or operations.

1919.12
Recordkeeping and Related Procedures Concerning Records in Custody of the Vessel

(a) A fully completed and up-to-date register shall be kept in the form prescribed or approved by the Administration, giving the particulars required with respect to:

(1) The inspections and thorough examinations required by 1919.15(a) and (b).

(2) The thorough examinations required by 1919.15(c).

(3) The thorough examinations required by 1919.17.

(4) The heat treatment required by 1919.16 (a) and (b), and 1919.19.

(b) Certificates in the form prescribed or approved by the Administration shall be kept up-to-date, be attached to the register, and shall contain the particulars required with respect to:

(1) The testing and examinations required by 1919.14, 1919.15(a), and 1919.19.

(2) The heat treatment required by 1919.16 and 1919.19.

(c) The certificates and entries in the register shall be signed by a person qualified under 1919.37.

(d) Adequate means shall be provided to enable persons examining the register, or any certificate attached thereto, to identify items of cargo gear referred to therein. Small items of gear, such as shackles, shall bear a mark to indicate that they have been initially tested.

(e) Records shall be kept aboard vessels identifying wire rope or articles of loose gear obtained from time to time and required to be certificated under the regulations of this part.

(f) An accredited person shall instruct the vessel's officers, or the vessel's operator if the vessel is unmanned, that the vessel's register and certificates shall be preserved for at least 4 years after the date of the latest entry except in the case of nonrecurring test certificates concerning gear which is kept in use for a longer period, in which event the pertinent certificates shall be retained so long as that gear is continued in use.

(g) In cases where derricks, spouts, suckers, or cranes are mounted permanently aboard barges which remain in domestic inland waters service, the certification documentation shall comply with the provisions of 1919.90 of this part.

Subpart D
Certification of Vessels' Cargo Gear

1919.13
General

(a) Except as noted in 1919.1 and as provided in exemptions under 1919.10(h), certification performed by accredited persons shall conform to the requirements contained in this subpart.

(b) Safe working loads assigned to assembled units of gear, shall be based on applicable design criteria acceptable to the accredited person. Where no design data on which to base a rating is obtainable, the safe working load ratings assigned shall be based on the owner's information and warranty that those so assigned are correct. Unit test certificates shall state the basis for any such safe working load assignment.

1919.14
Initial Tests of Cargo Gear and Tests After Alterations, Renewals or Repairs

(a)(1) Before being taken into use, hoisting machines, fixed gear aboard vessels accessory thereto, and loose gear and wire rope used in connection therewith shall be tested and examined and the safe working load thereof certified in the manner set forth in Subpart E of this part.

(2) Replacement or additional loose gear and wire rope obtained from time to time shall also be tested and examined in the manner set forth in paragraph (a)(1) of this section. However, the replacement of a component part of an article of loose gear such as a sheave, pin, or bushing does not require a new test certificate as long as the new component at least equals in all particulars the part replaced.

(b) In the case of untested gear which has been in use, an initial test in conformance with paragraph (a)(1) of this section shall be carried out: Provided, however, That existing standing rigging and wire rope will not be required to be tested but shall be thoroughly examined to ascertain its fitness for continued use in conformance with the requirements of 1919.24 and 1919.25.

(c) In the case of important alterations or renewals of the machinery and gear and also after repairs due to failure of or damage to other than loose components, a test as required in paragraph (a)(1) of this section shall be carried out.

(d) If the operation in which cargo gear is engaged never utilizes more than a fraction of the safe working load rating, the owner may, at his option, have said gear certificated for, and limited in operation to, a lesser maximum safe working load: Provided, however, That the gear concerned is physically capable of operation at the original load rating and the load reduction is not for the purpose of avoiding correction of any deficiency.

(e) In no case shall safe working loads be increased beyond the original design limitations unless such increase is based on engineering calculations by or acceptable to the accredited certification agency, and all necessary structural changes are carried out.

1919.15
Periodic Tests, Examinations and Inspections

(a) Derricks with their winches and accessory gear, including the attachments, as a unit; and cranes and other hoisting machines with their accessory gear, as a unit, shall be tested and thoroughly examined every four years in the manner set forth in Subpart E of this part.

(b) Derricks, their permanent attachments and any other fixed gear, the dismantling of which is especially difficult, shall be visually inspected every twelve months. In order to facilitate such inspection, all derricks shall be lowered.

(c) All hoisting machines (e.g., cranes, winches, blocks, shackles, and all other accessory gear) not included in paragraph (b) of this section shall be thoroughly examined every 12 months by means of a visual examination, supplemented as necessary by other means, such as a hammer test or with electronic, ultrasonic, or other nondestructive methods, carried out as carefully as conditions permit in order to arrive at a reliable conclusion as to the safety of the parts examined. Particular attention shall be paid to the suitability for continued use of all swivels and the pins and bushings of blocks. If necessary, parts of the machines or gear shall be dismantled. If blocks are disassembled, all shell bolt nuts shall be securely locked upon reassembly.

(d) Where a derrick or crane is mounted on a barge hull, and ballast tanks within the hull are used to facilitate use of the derrick or crane, or uncontrolled free surface may be a factor, each annual inspection or examination, as required, shall include such inspection as is necessary for the purpose of determining the integrity of any internals contributing to stability under conditions of use. The owner shall provide the accredited person with necessary information on any ballasting arrangements required.

(e) Annual inspection or examination, as required, shall include, among other things, examination of the following:

(1) Derrick heel attachment points. Heel pins may, if possible, be examined by nondestructive examination.

(2) Shrouds and stays necessary in the use of the gear, together with attachment points.

(3) Deck fittings for the securing of vangs, topping lifts, and/or preventers.

(4) Means of attachment to the hull of "A" frame or other fixed derrick or crane structure and of mobile types of equipment permanently placed aboard the barge or vessel.

(5) Clamshell buckets or other similar equipment, such as magnets, etc., used in conjunction with a derrick or crane mounted aboard a vessel, with particular attention to closing line wires and sheaves. The accredited person may supplement such examination by requesting any operational tests he may deem appropriate.

(6) Winch and other operating drums for excessive wear or defect.

1919.16
Heat Treatment

(a) All chains (other than bridle chains attached to derricks or masts), rings, hooks, shackles, and swivels made of wrought iron, which are used in hoisting or lowering, shall be annealed in accordance with 1919.36 at the following intervals:

(1) Half-inch and smaller chains, rings, hooks, shackles and swivels in general use, at least once every six months; and

(2) All other chains, rings, hooks, shackles, and swivels in general use, at least once every twelve months.

(3) In the case of gear used solely on lifting machinery worked by hand, twelve months shall be substituted for six months in paragraph (a)(1) of this section and two years for twelve months in paragraph (a)(2) of this section.

(4) When used in this paragraph, the term "in general use"means used on fifty-two or more days in a year. In any case, however, the period between annealings shall not exceed two years.

(b) Chains, rings, hooks, shackles, and swivels made of material other than wrought iron or steel shall be heat treated when necessary in accordance with 1919.36(b).

1919.17
Exemptions from Heat Treatment

Gear made of steel, or gear which contains (as in ball bearings swivels), or is permanently attached to (as with blocks) equipment made of materials which cannot be subjected to heat treatment shall be exempt from the requirements of 1919.16. Such gear, however, shall be thoroughly examined in the manner described in 1919.15(c).

1919.18
Grace Periods

(a) Annual or six-month requirements-by the end of the voyage during which they become due;

(b) Quadrennial requirements-within six months after the date when due;

(c) Grace periods shall not be deemed to extend subsequent due dates.

1919.19
Gear Requiring Welding

Chains or other gear which have been lengthened, altered or repaired by welding shall be properly heat treated where necessary, and, before again being put into use, shall be tested and reexamined in the manner set forth in Subpart E of this Part.

1919.20
Damaged Components

(a) Pursuant to 1918.51(b) of this chapter, any derrick or associated permanent fitting which is deformed in service between surveys shall be subjected to proof test to determine its suitability for continued service. If a proof test indicates that the derrick or associated permanent fitting may be continued in service without repair, a note of the existing deformity shall be made on the test certificate. When, in the opinion of the accredited person, it is unsafe to conduct a proof test with an existing deformity, the derrick or associated permanent fitting shall be replaced or repaired and then subjected to proof test in accordance with Subpart E of this part.

(b) Any loose gear components which are injured or deformed by a proof load shall be replaced before a certificate is issued.

(c) Any derrick, other fixed installation, or associated permanent fitting which is injured or deformed by a proof load shall be replaced or repaired and another proof load test shall be conducted without damage before a certificate is issued.

1919.21
Marking and Posting of Safe Working Loads

(a) The safe working load of the assembled gear and the minimum angle to the horizontal at which this load may be applied shall be plainly marked at the heels of all booms along with the date of the test. Where gear is certificated for use in union purchase, the union purchase safe working load shall also be plainly marked. Any limitations shall be noted in the vessel's papers.

(b) The safe working load shall be marked on all blocks used in hoisting or lowering.

(c) When the capacity of the boom of a crane or derrick has been or will be rated in accordance with the variance of its radius, the maximum safe working loads for the various working angles of the boom and the maximum and minimum radii at which the boom may be safely used shall be conspicuously posted near the controls and visible to the crane operator. Ratings may be stated in pounds. When they are stated in tons of 2,000 pounds, this fact shall be indicated.

1919.22
Requirements Governing Braking Devices and Power Sources

All types of winches and cranes shall be provided with means to stop and hold the proof load in any position, and the efficiency of such means shall be demonstrated. Electric winches, electrohydraulic winches fitted with electromagnetic or hydraulic brakes at the winch, or electric cranes shall be equipped so that a failure of the electric power shall stop the motion and set the brakes without any action on the part of the operator. Current for operation of electric winches and cranes during the tests shall be taken from the vessel's circuits. Shore current may be used if it passes through the vessel's main switchboard.

1919.23
Means of Derrick Attachment

Appropriate measures shall be taken to prevent the foot of a derrick from being accidentally lifted from its socket or support during the test.

1919.24
Limitations on Use of Wire Rope

(a) An eye splice made in any wire rope shall have at least three tucks with a whole strand of rope and two tucks with one-half of the wires cut out of each strand. However, this requirement shall not operate to preclude the use of another form of splice or connection which can be shown to be as efficient and which is not prohibited by Part 1918 of this chapter.

(b) Except for eye splices in the ends of wires, each wire rope used in hoisting or lowering, in guying derricks, or as a topping lift, preventer or pendant shall consist of one continuous piece without knot or splice.

(c) Eyes in the ends of wire rope cargo falls shall not be formed by knots and, in single part falls, shall not be formed by wire rope clips.

(d) The ends of falls shall be secured to the winch drums by clamps, U-bolts, shackles or some other equally strong method. Fiber rope fastenings shall not be used.

(e) Wire rope shall not be used for the vessel's cargo gear if in any length of eight diameters, the total number of visible broken wires exceeds 10 percent of the total number of wires, or if the rope shows other signs of excessive wear, corrosion, or defect. Particular attention shall be given to the condition of those sections of wire rope adjacent to any terminal connections, those sections exposed to abnormal wear, and those sections not normally exposed for examination.

1919.25
Limitations on Use of Chains

Chains forming a part of vessel's cargo gear shall not be used when, due to stretch, the increase of length of a measured section exceeds five percent, when a link is damaged, or when other external defects are evident. Chains shall not be shortened by bolting, wiring, or knotting.

Subpart E
Certification of Vessels:
Tests and Proof Loads; Heat Treatment;
Competent Persons

1919.26
Visual Inspection Before Tests

Before any test under this Subpart E is carried out, a visual inspection of the gear involved shall be conducted and any visibly defective gear shall be replaced or repaired. The provisions of 1919.15(d) shall be adhered to.

1919.27
Unit Proof Tests
Winches, Derricks and Gear Accessory Thereto

(a) Winches, with the whole of the gear accessory thereto (including derricks, goosenecks, eye plates, eye bolts, or other attachments), shall be tested with a proof load which shall exceed the safe working load as follows:

Safe working load	Proof Load
Up to 20 tons	25 percent in excess.
20 - 50 tons	5 tons in excess.
Over 50 tons	10 percent in excess.

(b) The proof load shall be lifted with the vessel's normal tackle with the derrick at an angle not more than 15 degrees to the horizontal, or, at the designed minimum angle when this is greater, or, when this is impracticable, at the lowest practicable angle. The angle at which the test was made shall be stated in the certificate of test. After the proof load has been lifted, it shall be swung as far as possible in both directions. In applying the proof load, the design factors of the gear concerned will determine whether the load is applied with a single part fall or with a purchase and the certificate of test shall state the means used. Where winches are fitted with mechanical brakes for manual operation they shall be demonstrated to be in satisfactory operating condition.

(c) In the case of heavy lift derrick barges, proof loads shall be applied, except as limited by design and stability considerations, at the maximum and minimum radii for which designed, as well as at any intermediate radius which the surveyor may deem necessary, and shall be swung as far as possible in both directions. Data with respect to each proof load applied shall be entered in the test certificate.

(d) No items of cargo gear furnished by outside sources shall be used as a part of the vessel's gear for the purpose of accomplishing the proof test.

(e) All tests prescribed by this section should in general be carried out by dead load, except that in the case of quadrennial tests, replacements, or renewals, spring or hydraulic balances may be used where dead loads are not reasonably available. However, no exception shall be allowed in the case of gear on new vessels.

(f) The test shall not be regarded as satisfactory unless the indicator remains constant under the proof load for a period of at least 5 minutes.

(g)(1) The safe working load, determined pursuant to the requirements of this section, shall be applicable only to a swinging derrick. When using two fixed derricks in "union purchase" rigs, the safe working load should generally be reduced. It is recommended that owners obtain union purchase safe working load certification based upon design study and analysis by, or acceptable to, a qualified technical office of an accredited gear certification agency, with the recognition that such determinations are valid only for the conditions contemplated in the analysis.

(2) Where both guys and preventers are fitted, union purchase certification shall state whether the guy or the preventer is the working strength member, when the guy is for slewing only, and when the guy and preventer should share working loads as far as practicable.

(h) When necessary in the proof testing of heavy derricks, the appropriate shrouds and stays shall be rigged.

1919.28
Unit Proof Tests
Cranes and Gear Accessory Thereto

(a) Except as noted in paragraph (e) of this section, cranes and other hoisting machines, together with gear accessory thereto, shall be tested with a proof load which shall exceed the safe working load as follows:

Safe working load	Proof Load
Up to 20 tons	25 percent in excess.
20 - 50 tons	5 tons in excess.
Over 50 tons	10 percent in excess.

(b) The proof load shall be lifted and swung as far as possible in both directions. If the jib or boom of the crane has a variable radius, it shall be tested with proof loads, as specified in paragraph (a) of this section, at the maximum and minimum radii. In the case of hydraulic cranes, when due to the limitation of pressure it is impossible to lift a load 25 percent in excess of the safe working load, it will be sufficient to lift the greatest possible load.

(c) Initial proof tests of new cranes shall be made only with a dead load as specified in paragraph (b) of this section.

(d) Initial tests of cranes which have been in service, quadrennial tests, or tests associated with replacements or renewals, may be made with spring or hydraulic balances where dead loads are not reasonably available under the following conditions:

(1) Tests shall be conducted at maximum, minimum, and intermediate radius points, as well as such points in the arc of rotation as meet with the approval of the accredited person.

(2) An additional test shall be conducted with partial load and shall include all functions and movements contemplated in the use of the crane.

(e) In cases where shore-type cranes are mounted permanently aboard barges, the requirements of this Subpart E with respect to unit proof tests and examinations shall not apply and the applicable requirements of Subpart H of this part shall be adhered to with respect to unit proof tests and examinations.

1919.29
Limitations on Safe Working Loads and Proof Loads

The proof loads specified by 1919.27 and 1919.28 shall be adjusted as necessary to meet any pertinent limitations based on stability and/or on structural competence at particular radii. Safe working loads shall be reduced accordingly.

1919.30
Examinations Subsequent to Unit Tests

(a) After satisfactory completion of the unit proof load tests required by 1919.27 and 1919.28, the cargo gear and all component parts thereof shall be given a thorough visual examination, supplemented as necessary by other means, such as a hammer test or with electronic, ultrasonic, or other nondestructive methods, to determine if any of the parts were damaged, deformed, or otherwise rendered unsafe for further use.

(b) When the test of gear referred to in paragraph (a) of this section is being conducted for the first time on a vessel, accessory gear shall be dismantled or disassembled for examination after the test. The sheaves and pins of the blocks included in this test need not be removed unless there is evidence of deformation or failure.

(c) For subsequent tests such parts of the gear shall be dismantled or disassembled after the test as necessary to determine their suitability for continued service.

(d) When blocks are disassembled all shell bolt nuts shall be securely locked upon reassembly.

(e) In carrying out the requirements of this section, replacement shall be required of:

(1) Any swivel found to have excessive tolerance as a result of wear on any bearing surface.

(2) Pins of blocks found to be shouldered, notched, or grooved from wear, in which case, in addition to replacing the pin, sheave bushings shall be examined for suitability for continued use.

1919.31
Proof Tests
Loose Gear

(a) Chains, rings, shackles and other loose gear (whether accessory to a machine or not) shall be tested with a proof load against the article equal to that shown in the following table:

Article of gear	Proof load
Chain, ring, hook, shackle or swivel .. ….	100 percent in excess of the safe working load.
Blocks:	
Single sheave block .....…….. ….	300 percent in excess of the safe working load[1].
Multiple sheave block with safe working load up to and including 20 tons .....…… …	100 percent in excess of the safe working load.
Multiple sheave block with safe working load over 20 tons up to and including 40 tons .....…….. ….	20 tons in excess of the safe working load.
Multiple sheave block with safe working load over 40 tons ..... ……..	50 percent in excess of the safe working load.
Pitched chains used with hand-operated blocks and rings, hooks, shackles or swivels permanently attached thereto .....……	50 percent in excess of the safe working load.
Hand-operated blocks used with pitched chains and rings, hooks, shackles or swivels permanently attached thereto .....……...	50 percent in excess of the safe working load.

[1]The proof load applied to the block is equivalent to twice the maximum resultant load on the eye of pin of the block when lifting the nominal safe working load defined in (i) below. The proof load is, therefore, equal to four times the safe working load as defined in (i) below or twice the safe working load as defined in (ii) below.
(i) The nominal safe working load of a single-sheave block should be the maximum load which can be safely lifted by the block when the load is attached to a rope which passes around the sheave of the block.
(ii) In the case of a single-sheave block where the load is attached directly to the block instead of to a rope passing around the sheave, it is permissible to lift a load equal to twice the nominal safe working load of the block as defined in (i) above.
(iii) In the case of a lead block so situated that an acute angle cannot be formed by the two parts of the rope passing over it (i.e., the angle is always 90 degrees or more), the block need not have a greater nominal safe working load than one-half the maximum resultant load which can be placed upon it.

(b) In cases where persons accredited to carry out loose gear tests may be retained to conduct tests of special stevedoring gear as described in 1918.61(b) of this chapter, which does not form part of a vessel's equipment, such tests shall adhere to the requirements set forth in 1918.61(b)(1), (2), and (3) of this chapter.

(c) After being tested as required by paragraph (a) of this section, and before being taken into use, all chains, rings, hooks, shackles, blocks or other loose gear, except as noted in 1919.32, shall be thoroughly examined, the sheaves and pins of the blocks being removed for this purpose, to determine whether any part has been injured or permanently deformed by the test. Shell bolt nuts shall be securely locked upon reassembly. Defective loose gear components shall be replaced before the certificate is issued.

(d) Any certificate relating to shackles, swivels or strength members of single-sheave blocks which have been restored to original dimensions by welding shall state this fact.

1919.32
Specially Designed Blocks and Components

(a) Blocks and connecting components of an unusual nature which are specially designed and constructed as an integral part of a particular lifting unit and are either permanently affixed or of such design that two or more components must be tested together need not be considered as loose gear for purposes of 1919.31.

(b) In lieu of the loose gear proof test required by 1919.31(a), design data shall be submitted to an accredited certification agency indicating design and material specifications and analysis whereby the designed strength of such gear may be determined.

(c) Subsequent to the test of the lifting unit as a whole, a thorough visual examination shall be made of disassembled parts and an electronic, ultrasonic, or other equally efficient nondestructive examination shall be made of those parts not dismantled to ensure the safe condition of such parts.

1919.33
Proof Tests
Wire Rope

Wire rope, except as provided in 1919.14(b), shall be tested by sample, a piece being tested to destruction, and the safe working load of running ropes, unless otherwise acceptable to the Administration on the basis of design, shall not exceed one-fifth of the breaking load of the sample tested. In the case of running ropes used in gear with a safe working load exceeding 10 tons, the safe working load shall not exceed one-fourth of the breaking load of the sample tested.

1919.34
Proof Tests After Repairs or Alterations

When proof loads are applied after repairs or alterations, all parts of the assembled gear shall be examined as required in 1919.30, 1919.31(c), or 1919.32(c), whichever is applicable.

1919.35
Order of Tests

When both unit and loose gear proof load tests are required, the loose gear test may be carried out after completion of the unit test.

1919.36
Heat Treatment

(a) The annealing of wrought iron gear required by this part shall be accomplished at a temperature between 1100 deg. and 1200 deg. F. and the exposure shall be of between 30 and 60 minutes duration. After being annealed, the gear shall be allowed to cool slowly and shall then be carefully inspected. All annealing shall be carried out in a closed furnace.

(b) When heat treatment of loose gear made of other than wrought iron or steel is recommended by the manufacturer, it shall be carried out in accordance with the specifications of the manufacturer.

1919.37
Competent persons.

All gear certification functions shall be performed by competent persons as set forth in the following table:

Functions	Competent person
Any testing, examination, inspection, or heat treatment required in United States ports.	Responsible individual, surveyor or other authorized agent of a person accredited by the Administration under the regulations contained in this part.
Any testing, examination, inspection, or heat treatment required while the vessel is in other than United States ports.	Responsible individual, surveyor or other authorized agent of persons recognized by the Commandant of the United States Coast Guard or by a foreign nation whose certification is accepted by the Administration as being in substantial accordance with 1918.12(a) of this chapter.
Testing, examination and inspection of loose gear or wire rope; heat treatment of loose gear.	Employees or authorized agents of persons accredited specifically by the Administration for this purpose under the regulations contained in this part, or the manufacturer of the gear concerned unless disapproved by the Assistant Secretary.

Subpart F
Accreditation to Certificate
Shore-Based Equipment

1919.50
Eligibility for Accreditation to Certificate Shore-Based Material Handling Devices Covered by 1917.50 of this Chapter, Safety and Health Regulations for Longshoring

(a) A person applying for accreditation to carry out certification activities and to issue and maintain the requisite records must be:

(1) A manufacturer of cranes or derricks or of specialized equipment of the type for which accreditation application is made, or a person or organization representing such a manufacturer in a technical capacity; or

(2) Technically experienced and qualified to carry out examinations and/or testing, as applicable, of vessels or shore-based equipment or gear of the type for which accreditation application is made.

(b) The owner of shore-based equipment affected may designate a member of his organization to carry out certification functions respecting the owner's equipment, on the following conditions:

(1) The designee is technically experienced and qualified in the inspection and maintenance or design of the type of equipment involved, aside from employment as an operator only.

(2) The designee has applied to an accredited, nationally operating certification agency and has been granted appointment or equivalent recognition by that agency as a surveyor for the purpose intended.

(3) Certification activities carried out by the designee are cleared through the offices, and are subject to the approval, of the accredited certificating agency. When equipment is found satisfactory for use upon any survey, said equipment may be used pending receipt of notification of such approval or any disapproval.

(4) In cases where equipment is certificated by a person designated by the equipment owner, the cognizant accredited certification agency retains the right to inspect such equipment as desired and convenient in order to ascertain the adequacy of the certification activity performed.

(c) Accreditation to conduct such nondestructive examination as may be a part of any certification activity may be granted to applicants found competent and equipped to carry out this activity.

(d) Unless exemptions are granted at the discretion of the Assistant Secretary in cases of practical difficulties or unnecessary hardship, applicants for accreditation as specified in this section shall be prepared to carry out all necessary functions, except that any requisite wire rope tests, nondestructive examinations, and heat treatments may be carried out by the manufacturer or the gear concerned or by another person accredited specifically for these purposes.

(e) A person applying for accreditation shall have a satisfactory record of relevant experience and performance, and shall be in sound financial condition.

1919.51
Provisions Respecting Application for Accreditation, Action Upon the Application, and Related Matters

The provisions of 1919.3, 1919.4, 1919.5, 1919.7, 1919.8, and 1919.9 shall govern accreditation to certificate shore-based material handling devices to the extent applicable.

Subpart G
Duties of Persons Accredited to Certificate Shore-Based Material Handling Devices

1919.60
General Duties, Exemptions

(a) The requirements of Subpart H of this part shall be strictly observed: Provided, however, That in cases of practical difficulties or unnecessary hardships, the Assistant Secretary in his discretion may grant exemptions or variations from any provision in that subpart.

(b) Except as otherwise noted in this part, all functions required by Subpart H of this part shall be carried out by or under the supervision of a person accredited for the purpose or by his authorized representative.

(c) All required unit proof load tests shall be carried out by the use of weights as a dead load. Only where this is not possible may dynamometers or other recording test equipment be used. Any such recording test equipment owned by an accredited person shall have been tested for accuracy within the 6 months next preceding application for accreditation or renewal thereof. Such test shall be performed with calibrating equipment which has been checked in turn so that indications are traceable to the National Bureau of Standards. A copy of test reports shall accompany the accreditation application. Where test equipment is not the property of the accredited person, that person shall not issue any certificate based upon the use of such equipment unless its owner has made available a certificate of accuracy based on the requirements of this paragraph obtained within the year prior to such use, and stating the errors of the equipment. In any event, reasonable standards of accuracy shall be met and proof loads adjusted as necessary.

(d) The qualifications of any person appointed or recognized by any accredited person for the purpose of carrying out certification functions shall meet with the approval of the Assistant secretary.

(e) Sections 1919.10(e) and (g) and 1919.11 shall govern, to the extent applicable, persons accredited under Subpart F of this part.

Subpart H
Certification of Shore-Based Material Handling Devices

1919.70
General Provisions

(a) Certification of shore-based material handling devices shall conform to the requirements contained in this subpart, except in cases for which exemptions or variations have been granted by the Assistant secretary as provided in 1919.50(d) and 1919.60(a).

(b) Any replacements or repairs deemed necessary by the accredited person shall be carried out before application of a proof test.

(c) ***"Ton"*** in this subpart means a ton of 2,000 pounds.

(d) When applied to shore-based material handling devices, ratings may be stated in pounds rather than tons. When stated in tons of 2,000 pounds, this fact shall be indicated.

1919.71
Unit Proof Test and Examination of Cranes

(a) Unit proof tests of cranes shall be carried out at the following times:

(1) In the cases of new cranes, before initial use and every 4 years thereafter.

(2) In the cases of uncertificated cranes which have been in use, at the time of initial certification and every 4 years thereafter.

(3) After important alterations and renewals and after repairs due to failure of, or damage to major components.

(b) Unit proof load tests of cranes shall be carried out where applicable with the boom in the least stable direction relative to the mounting, based on the manufacturer's specifications.

(c) Unit proof load tests shall be based on the manufacturer's load ratings for the conditions of use and shall, except in the case of bridge type cranes utilizing a trolley, consist of application of a proof load of 10 percent in excess of the load ratings at maximum and minimum radii as the certificating authority may deem necessary in the circumstances[1]. Trolley equipped cranes shall be subject to a proof load of 25 percent in excess of the manufacturer's load rating. In cases of foreign manufacture, the manufacturer's specifications shall be subject to approval by the certificating authority as being equivalent to U.S. practice. The weight of all auxiliary handling devices such as, but not limited to, magnets, hooks, slings, and clamshell buckets, shall be considered part of the load.

[1]The manufacturer's load ratings are usually based upon percentage of tipping loads under some conditions and upon limitations of structural competence at others, as well as on other criteria such as type of crane mounting, whether or not outriggers are used, etc. Some cranes utilizing a trolley may have only one load rating assigned and applicable at any outreach. It is important that the manufacturer's ratings be used.

(d) An examination shall be carried out in conjunction with each unit proof load test. The accredited person, or his authorized representative, shall make a determination as to correction of deficiencies found. the examination shall cover the following points as applicable:

(1) All functional operating mechanisms shall be examined for improper function, maladjustment, and excessive component wear, with particular attention to sheaves, pins, and drums. The examination shall include operation with partial load, in which all functions and movements, including, where applicable, maximum possible rotation in both directions, are performed.

(2) All safety devices shall be examined for malfunction.

(3) Lines, tanks, valves, drains, pumps, and other parts of air or hydraulic systems shall be examined for deterioration or leakage.

(4) Loose gear components, such as hooks, including wire rope and wire rope terminals and connections, shall be checked with particular attention to sections of wire rope exposed to abnormal wear and to sections not normally exposed for examination. The provisions of 1919.24 shall apply in wire rope examinations. Cracked or deformed hooks shall be discarded and not reused on any equipment subject to the provisions of Part 1918 of this chapter and this Part 1919.

(5) Rope reeving shall comply with manufacturer's recommendations.

(6) Deformed, cracked, or excessively corroded members in crane structure and boom shall be repaired or replaced as necessary.

(7) Loose bolts, rivets, or other connections shall be corrected.

(8) Worn, cracked, or distorted parts affecting safe operation shall be corrected.

(9) Brake and clutch system parts, linings, pawls, and ratchets shall be examined for excessive wear and free operation.

(10) Load, boom angle, or other indicators shall be checked over their full range for any significant inaccuracy. A boom angle or radius indicator shall be fitted.

(11) It shall be ascertained that there is a durable rating chart visible to the operator, covering the complete range of the manufacturer's capacity ratings at all operating radii, for all permissible boom lengths and jib lengths, with alternate ratings for optional equipment affecting such ratings. Necessary precautions or warnings shall be included. Operating controls shall be marked or an explanation of controls shall be posted at the operator's position to indicate function.

(12) Where used, clamshell buckets or other similar equipment such as magnets, etc., shall be carefully examined in all respects, with particular attention to closing line wires and sheaves. The accredited person may supplement such examination by requesting any operational tests as may be appropriate.

(13) Careful examination of the junction areas of removable boom sections, particularly for proper seating, cracks, deformities, or other defects in securing bolts and in vicinity of such bolts.

(14) It shall be ascertained that no counterweights in excess of the manufacturer's specifications are fitted.

(15) Such other examination or supplemental functional tests shall be made as may be deemed necessary by the accredited person under the circumstances.

1919.72
Annual Examination of Cranes

(a) In any year in which no quandrennial unit proof test is required, an examination shall be carried out by an accredited person or his authorized representative. Such examination shall be made not later than the anniversary date of the quadrennial certification and shall conform with the requirements of 1919.71(d).

1919.73
Unit Proof Test and Examination of Derricks

(a) Unit proof tests of derricks shall be carried out at the same times as are specified in 1919.71(a) for cranes.

(b) Unit proof load tests and safe working load ratings shall be based on the design load ratings at the ranges of boom angles or operating radii. Unit proof loads shall exceed the safe working load as follows:

Safe working load	Proof Load
Up to 20 tons	25 percent in excess.
20 - 50 tons	5 tons in excess.
Over 50 tons	10 percent in excess.

Proof loads shall be applied at the designed maximum and minimum boom angles or radii, or, if this is impracticable, as close to these as practicable. The angles or radii of test shall be stated in the certificate of test. Proof loads shall be swung as far as possible in both directions. The weight of all auxiliary handling devices shall be considered a part of the load.

(c) After satisfactory completion of a unit proof load test, the derrick and all component parts thereof shall be carefully examined in accordance with the requirements of 1919.71(d), as far as applicable.

1919.74
Annual Examination of Derricks

(a) In any year in which no quadrennial unit proof test is required, an examination shall be carried out by an accredited person or his authorized representative. Such annual examination shall be made not later than the anniversary date of the quadrennial certification and shall conform in all applicable respect with 1919.71(d).

1919.75
Determination of Crane or Derrick Safe Working Loads and Limitations in Absence of Manufacturer's Data

(a) In the event neither manufacturer's data nor design data on safe working loads (including any applicable limitations) are obtainable, the safe working load ratings assigned shall be based on the owner's information and warranty that those so assigned are correct. Unit test certificates shall state the basis for any such safe working load assignment.

1919.76
Safe Working Load Reduction

(a) If the operation in which equipment is engaged never utilizes more than a fraction of the safe working load rating, the owner of such equipment may, at his option, have the crane or derrick certificated for and operated at a lesser maximum safe working load in keeping with the use and based on radius and other pertinent factors: Provided, however, That the equipment concerned is physically capable of operation at the original load rating and the load reduction is not for the purpose of avoiding correction of any deficiency.

1919.77
Safe Working Load Increase

(a) In no case shall safe working loads be increased beyond the manufacturer's ratings or original design limitations unless such increase meets with the manufacturer's approval. Where the manufacturer's services are not available, or where the equipment is of foreign manufacture, engineering design analysis by, or acceptable to, the accredited certification agency is required. All necessary structural changes shall be carried out.

1919.78
Nondestructive Examination

(a) Wherever it is considered necessary by the accredited person or his authorized representative and wherever it is practical and advisable to avoid disassembly of equipment, removal of pins, etc., examination of structure or parts by electronic, ultrasonic, or other nondestructive methods may be carried out, provided that the procedure followed is acceptable to the Assistant Secretary and the person carrying out such examination is accredited or acceptable to the Assistant Secretary for the purpose.

1919.79
Wire Rope

(a) Wire rope and replacement wire rope shall be of the same size, same or better grade, and same construction as originally furnished by the equipment manufacturer or contemplated in the design, unless otherwise recommended by the equipment or the wire rope manufacturer due to actual working condition requirements. In the absence of specific requirements as noted, wire rope shall be of a size and construction suitable for the purpose, and a safety factor of 4 shall be adhered to, and verified by wire rope test certificate.

(b) Wire rope in use on equipment previously constructed and prior to initial certification of said equipment shall not be required to be tested, but shall be subject to thorough examination at the time of initial certification of the equipment.

1919.80
Heat Treatment

(a) Wherever heat treatment of any loose gear is recommended by the manufacturer, it shall be carried out in accordance with the specifications of the manufacturer.

1919.81
Examination of Bulk Cargo Loading or Discharging Spouts or Suckers

(a) Those portions of bulk cargo loading or discharging spouts or suckers which extend over vessels, together with any portable extensions, rigging components, outriggers, and attachment points supporting them or any of their components vertically, shall be examined annually. The examination shall be carried out with particular attention to the condition of wire rope and accessories. The equipment shall not be considered satisfactory unless, in the opinion of the accredited person or his authorized representative, it is deemed fit to serve its intended function.

1919.90
Documentation

(a) Documents issued respecting a certification function by an accredited person shall be on forms approved for such use by the Assistant Secretary and shall so state.

(b) Such documents shall be issued by the accredited person to the owners of affected equipment, attesting to satisfactory compliance with applicable requirements. The forms used shall contain the following information:

(1) Unit proof tests where required -

(i) Identification of crane or derrick including manufacturer, model number, serial number, and ownership.

(ii) Basis for assignment of safe worksigned (i.e., whether based on manufacturing load ratings, with the ratings asturer's ratings, whether for any specific service, etc.).

(iii) Proof test details noting radii and proof loads, how applied, and, where applicable, direction relative to mounting.

(iv) A statement that the test and associated examination were conducted and all applicable requirements of this subpart are met.

(v) Any necessary remarks or supplementary data, including limitations imposed and the reason thereof.

(vi) Name of accredited person and identification of authorized representative actually conducting test and/or examination.

(vii) Authorized signature of accredited person; date and place of test and/or examination.

(2) Annual examination of cranes or derricks -

(i) Information specified in paragraphs (b)(1)(i), (v), (vi), and (vii) of this section.

(ii) A statement that the required examination has been carried out and that, in the opinion of the accredited person or his authorized representative, the equipment has been found in compliance in all applicable respects with the requirements of this subpart.

(3) Annual examination of bulk cargo loading or discharging spouts or suckers -

(i) Specific identification of equipment.

(ii) A statement that examination has been completed and that, in the opinion of the accredited person or his authorized representative, the equipment meets the criteria of 1919.81(a).

(iii) Information specified in paragraphs (b)(1)(v), (vi), and (vii) of this section.

(c) Certificates relating to wire rope, whether tested by or under the supervision of the accredited person or by its manufacturer and whether or not issued on the basis of the manufacturer's certificates, shall follow the general format of a wire rope test form approved by the Administration.

(d) Accredited persons shall advise owners of affected equipment of the necessity for maintaining required documentation or acceptable copies thereof available for inspection at or near the worksite of the equipment involved.

(1) Where initial and periodic tests as well as annual examinations are required, documentation available for inspection shall include the latest unit test certificate and any subsequent annual examination certificates, together with wire rope test certificates relating to any replacements since the last unit test or annual examination.

(2) Where only annual examination is required, documentation available for inspection shall include the latest annual examination certificate and wire rope test certificates relating to any wire replaced since the last annual examination.

(3) In the event that the heat treatment of any loose gear is recommended by its manufacturer, the latest heat treatment certificate, attesting to compliance with the manufacturer's specifications, shall be part of the available documentation.

(e) No certification shall be issued until any deficiencies considered by the accredited person to constitute a currently unsatisfactory condition have been corrected. Replacement parts shall be of equal or better quality than original equipment and suitable for the purpose. In the event deficiencies remain uncorrected and no certification therefore is issued, the accredited person shall inform the nearest district office of the Administration of the circumstances.